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EXAMINER

BOUTAH, ALINA A

ART UNIT	PAPER NUMBER
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2143

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/034,606

Applicant(s)

FUEHRER ET AL.

Examiner

Alina N Boutah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This action is in response to Applicant's amendment filed November 20, 2006. Claims 1-20 are pending in the present application.

Claim Rejections - 35 USC § 101

Claim 15-20 have been amended to overcome the 35 U.S.C. 101 rejection. Therefore the rejections are now withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,706,278 issued to Robillard et al. (hereinafter referred to as Robillard) in view of Applicant's Admitted Prior Art (hereinafter referred to as AAPA).

Regarding claim 1, Robillard teaches a method of exchanging data between at least two users that are interconnected over a bus system, the data being contained in messages transmitted by the users over the bus system, the method comprising the steps of:

transmitting the data as event-oriented data over the bus system, as long as a preselectable latency elapsing between a transmission request by one of the users and an effected transmission operation of the one of the users is ensured for each message to be transmitted, as a function of a capacity utilization of the bus system (abstract; col. 1, lines 25-32); and

if the preselectable latency elapsing between the transmission request by the one of the users and the effected transmission operation of the one of the users is not ensured for each message to be transmitted, transmitting the data over the bus system according to a deterministic operation (abstract; col. 2, lines 35-37; col. 3, lines 36-62).

However, Robillard does not explicitly teach “if and conditional” that a preselectable latency is not ensured, although he teaches generating time slots (deterministic operation) for all data transmissions.

AAPA discloses utilizing deterministic operation in an event-oriented communication system (specification page 3, line 1 to page 2, line 3). At the time the invention was made, one of ordinary skill in the art would have been motivated to utilize deterministic operation in order improve the handling of normal cases and worst cases without losing the basic processability of the worst case (Specification, page 3, line 28 to page 4, line 3).

Regarding claim 2, Robillard teaches the method according to claim 1, further comprising the step of: monitoring the capacity utilization over time, wherein: the preselectable latency cannot be ensured for each message to be transmitted if an uninterrupted utilization of the bus system over time exceeds a preselectable time threshold (figure 4; col. 9, lines 26-42).

Regarding claim 3, Robillard teaches the method according to claim 1, further comprising the step of: monitoring the capacity utilization, wherein: the preselectable latency cannot be ensured for each message to be transmitted if a number of messages transmitted in direct succession over the bus system exceeds a preselectable threshold (col. 12, line 41 to col. 13, line 7).

Regarding claim 4, Robillard teaches the method according to claim 3, further comprising the steps of: counting by the user the messages transmitted in direct succession from the one of the users over the bus system; and transmitting a current number of the messages in direct succession over the bus system to others of the users (col. 12, line 41 to col. 13, line 7).

Regarding claim 5, Robillard teaches the method according to claim 4, wherein: the current number of the messages being transmitted in direct succession in one of a cyclic redundancy check and another checksum is included in a count produced by the counting to

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ensure a data content of one of the messages and is transmitted together with the one of the messages (col. 9, lines 26-43).

Regarding claim 6, Robillard teaches the method according to claim 5, further comprising the step of: jointly forming the one of the cyclic redundancy check and the other checksum from the data content of the one of the messages and the current number of the messages being transmitted in direct succession (col. 11, lines 30-59).

Regarding claim 7, Robillard teaches the method according to claim 1, further comprising the step of: switching from the deterministic operation over the bus system to an event-oriented transmission when a predetermined end of the deterministic operation is reached (abstract; col. 2, lines 35-37; col. 3, lines 36-62).

Regarding claim 8, Robillard teaches the method according to claim 1, further comprising the step of: transmitting the data transmitted according to the deterministic operation in a time-triggered manner (col. 2, lines 35-37; col. 3, lines 36-62).

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Regarding claim 9, Robillard teaches the method according to claim 8, wherein: the time-triggered manner corresponds to a time-division multiple-access (TDMA)-based operation (col. 1, lines 50-67).

Regarding claim 10, Robillard teaches the method according to claim 1, further comprising the step of: transmitting the data transmitted according to the deterministic operation with dynamically variable priorities of one of the messages and message groups on a priority shift basis (col. 1, lines 50-67).

Regarding claim 11, Robillard teaches a communication system, comprising:

at least two users (figure 1; col. 1, line 42);

a bus system over which the at least two users are interconnected for exchanging data among the at least two users, the data being contained in messages transmittable from the at least two users over the bus system (figure 1);

an arrangement for monitoring a capacity utilization of the bus system (col. 12, line 41 to col. 13, line 7);

an arrangement for performing an event-oriented transmission of the data over the bus system (col. 1, lines 25-32);

an arrangement for performing a deterministic transmission of the data over the bus system (col. 2, lines 35-37; col. 3, lines 36-62); and

an arrangement for selecting one of the event-oriented transmission and the deterministic transmission, wherein: the arrangement for selecting selects the event-oriented transmission, as long as a preselectable latency elapsing between a transmission request by one of the at least two users and an effected transmission operation on the part of the one of the at least two users is able to be ensured as a function of the capacity utilization of the bus system for each message to be transmitted, and

the arrangement for selecting selects the deterministic transmission if the preselectable latency elapsing between the transmission request by the one of the at least two users and the effected transmission operation of the one of the at least two users is not ensured for each message to be transmitted (abstract; col. 1, lines 25-32; col. 2, lines 35-37; col. 3, lines 36-62).

However, Robillard does not explicitly teach “if and conditional” that a preselectable latency is not ensured, although he teaches generating time slots (deterministic operation) for all data transmissions.

AAPA discloses utilizing deterministic operation in an event-oriented communication system (specification page 3, line 1 to page 2, line 3). At the time the invention was made, one of ordinary skill in the art would have been motivated to utilize deterministic operation in order improve the handling of normal cases and worst cases without losing the basic processability of the worst case (Specification, page 3, line 28 to page 4, line 3).

Regarding claim 12, Robillard teaches a memory element of a communication system for one of a plurality of users, the communication system being connected to at least another of the plurality of users over a bus system for an exchange of data, the memory element storing a program that is able to run on a computer of the one of the plurality of users, the program causing the computer to perform the steps of:

transmitting the data as event-oriented data over the bus system, as long as a preselectable latency elapsing between a transmission request by the one of the plurality of users and an effected transmission operation of the one of the plurality of users is ensured for each message to be transmitted, as a function of a capacity utilization of the bus system (abstract; col. 1, lines 25-32); and

if the preselectable latency elapsing between the transmission request by the one of the plurality of users and the effected transmission operation of the one of the plurality of users is not ensured for each message to be transmitted, transmitting the data over the bus system according to a deterministic operation (abstract; col. 2, lines 35-37; col. 3, lines 36-62).

However, Robillard does not explicitly teach “if and conditional” that a preselectable latency is not ensured, although he teaches generating time slots (deterministic operation) for all data transmissions.

AAPA discloses utilizing deterministic operation in an event-oriented communication system (specification page 3, line 1 to page 2, line 3). At the time the invention was made, one of ordinary skill in the art would have been motivated to utilize deterministic operation in order

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improve the handling of normal cases and worst cases without losing the basic processability of the worst case (Specification, page 3, line 28 to page 4, line 3).

Regarding claim 13, Robillard teaches the memory element according to claim 12, wherein: the memory element includes one of a read-only memory, a random-access memory, and a flash memory (figure 2).

Regarding claim 14, Robillard teaches the memory element according to claim 12, wherein: the computer includes a microprocessor (figure 2).

Regarding claim 15, Robillard teaches a computer program for causing a computer to perform the steps of:

transmitting data as event-oriented data over a bus system, as long as a preselectable latency elapsing between a transmission request by one of a plurality of users and an effected transmission operation of the one of the plurality of users is ensured for each message to be transmitted, as a function of a capacity utilization of the bus system (abstract; col. 1, lines 25-32); and

if the preselectable latency elapsing between the transmission request by the one of the plurality of users and the effected transmission operation of the one of the plurality of users is

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not ensured for each message to be transmitted, transmitting the data over the bus system according to a deterministic operation (abstract; col. 2, lines 35-37; col. 3, lines 36-62).

However, Robillard does not explicitly teach “if and conditional” that a preselectable latency is not ensured, although he teaches generating time slots (deterministic operation) for all data transmissions.

AAPA discloses utilizing deterministic operation in an event-oriented communication system (specification page 3, line 1 to page 2, line 3). At the time the invention was made, one of ordinary skill in the art would have been motivated to utilize deterministic operation in order improve the handling of normal cases and worst cases without losing the basic processability of the worst case (Specification, page 3, line 28 to page 4, line 3).

Regarding claim 16, Robillard teaches the computer program according to claim 15, wherein: the computer includes a microprocessor (figure 2).

Regarding claim 17, Robillard teaches the computer program according to claim 15, wherein: the computer program is stored on a memory element (figure 2).

Regarding claim 18, Robillard teaches the computer program according to claim 17, wherein: the memory element includes a flash memory (figure 2).

Regarding claim 19, Robillard teaches the method according to claim 1, wherein (a) the transmission of the data as event-oriented data and (b) the transmission of the data according to the deterministic operation are mutually exclusive (col. 1, lines 25-39).

Regarding claim 20, Robillard teaches the communication system according to claim 11, wherein (a) the selection by the arrangement of the event-oriented transmission and (b) the selection by the arrangement of the deterministic transmission are mutually exclusive (col. 1, lines 25-39).

Response to Arguments

Applicant's arguments with respect to claims 1, 11, 12, and 15 have been considered but are not found persuasive.

In response to Applicant's argument that the combination of Robillard and AAPA does not teach "if, and condition up that, the preselected latency... is not ensured for each message to be transmitted," the PTO respectfully disagrees and submits that this is taught by the Robillard-AAPA combination. As cited above, AAPA teaches that data is transmitted according to a deterministic operation, by reserving certain time ranges and having an event-controlled transmission of messages within the reserved time ranges. The "event-controlled basis" in "certain reserved time ranges" (see Specification, page 3, lines 28-32) are interpreted as the "condition" as claimed.

Applicant employs broad language, which includes the use of word, and phrases, which have broad meanings in the art. In this case, “if, and conditional upon” does not equate to “if and only if.” In addition, the claim does not disclose what happens if the preselected latency... is ensured for each message to be transmitted.

Applicant has not amended the claims significantly enough to construe a narrower meaning to the limitations. As the claims breadth allows multiple interpretations and meanings, which are broader than Applicant’s disclosure, the Examiner is forced to interpret the claim limitations as broadly and as reasonably possible, in determining patentability of the disclosed invention. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.1993).

Failure for Applicant to significantly narrow definition/scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant intends broad interpretation be given to the claims. The Examiner has interpreted the claims with scope parallel to the Applicant in the response, and reiterates the need for the Applicant to more clearly and distinctly, define the claimed invention.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alina N. Boutah whose telephone number is 571-272-3908. The examiner can normally be reached on Monday-Friday (9:00 am - 5:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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